REMARKS

Claims 1-9 are currently pending, wherein claims 1, 2, 8 and 9 are independent. Favorable reconsideration is respectfully requested in view of the remarks presented herein below.

At the outset, Applicants note with appreciation the indication that claims 4 and 5 contain allowable subject matter.

In paragraph 1 of the final Office action ("Action"), the Examiner rejects claims 1, 2, 8, and 9 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0044205 to Nagaoka ("Nagaoka") in view of U.S. Patent Application Publication No. 2000/0120365 to Asano ("Asano"). Applicants respectfully traverse this rejection.

In order to support a rejection under 35 U.S.C. § 103, the Examiner must establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness three criteria must be met. First, there must be some rationale to combine the cited references. Second, there must be a reasonable expectation of success. Finally, the combination must teach each and every claimed element. In the present case, claims 1, 2, 8, and 9 are patentable over the combination of Nagaoka and Asano for at least the reason that the combination fails to disclose each and every claimed element as discussed below.

Independent claim 1 defines an image pickup apparatus that includes, *inter alia*, an average value calculating means for calculating average values of pixel values of individual color components constituting an image of each frame; and a gain calculating means for calculating gains by comparing the average values of the pixel values of the individual color components of the image of each frame calculated by said average value calculating means for all the frames in one cycle of flicker generation, calculating maximum values using the average values for all the frames in one cycle of flicker generation, calculating gains according to the maximum values for adjusting the average values to a maximum range, and for outputting the gains as gains of the individual color components to be supplied to a signal amplifier.

Nagaoka discloses an image pickup apparatus with reduced flicker. The image pickup apparatus includes a solid-state imaging device, an accumulating section, first and second imaging parameter setting sections, a calculating section, a flicker detecting section, and a

switching section. The accumulating section 11 computes the projection output values of predetermined horizontal lines of the individual frames, and supplies them to the calculating section 15. In response to the projection output values of the four frames, the calculating section 15 computes a flicker index 12. The flicker index is computed as the accumulation value of the variations in the projection output values D(n). However, nowhere in Nagaoka is there any disclosure of calculating average values of pixel values of individual color components constituting an image of each frame or calculating gains by comparing the average values of the pixel values of the individual color components of the image of each frame calculated by said average value calculating means for all the frames in one cycle of flicker generation as claimed.

Asano discloses a method for flicker correction of a moving picture consisting of a plurality of frames. The method includes, calculating moving averages of accumulation histograms for each frame of image data. Then, gamma tables for correcting the image data of a frame in the plurality of frames are made such that the accumulative histograms after corrected with the gamma tables match with the moving averages of the accumulative histograms. However, Asano, like Nagaoka, fails to disclose or suggest calculating average values of pixel values of individual color components constituting an image of each frame or calculating gains by comparing the average values of the pixel values of the individual color components of the image of each frame calculated by said average value calculating means for all the frames in one cycle of flicker generation as claimed.

In rejecting claim 1, the Examiner asserts that Asano discloses calculating average values of pixel values of individual color components in as much as Asano discloses calculating moving average accumulative histograms for the frames in the moving picture as discussed in paragraph [0090] of Asano. The Examiner's assertion is unfounded for the following reason.

Although Asano discloses determining an accumulative histogram for the individual colors in each frame and calculating a moving average between the frame histograms, the accumulative histograms of Asano are not the average values of pixel values of individual color components constituting an image of each frame. To the contrary, a discussed in paragraph [0037] of Asano the accumulative histograms represents the percentage of each pixel value

relative to the number of all the pixels in the frame (i.e., the distribution of pixels values), not the average pixel value as claimed.

Since Nagaoka and Asano both fail to disclose or suggest calculating average values of pixel values of individual color components constituting an image of each frame or calculating gains by comparing the average values of the pixel values of the individual color components of the image of each frame calculated by said average value calculating means for all the frames in one cycle of flicker generation as claimed, the combination of these two references cannot possibly disclose or suggest said feature. Therefore, even if one skilled in the art had some rationale to combine Nagaoka and Asano (which Applicants do not concede), the combination would still fail to render claim 1 unpatentable because the combination fails to disclose or suggest each and every claimed element.

Claims 2, 8, and 9 define an image pickup apparatus (claim 2) or method of image processing (claims 8 and 9) that includes, *inter alia*, calculating average values of pixel values of individual color components constituting an image of each frame or calculating gains by comparing the average values of the pixel values of the individual color components of the image of each frame calculated by said average value calculating means for all the frames in one cycle of flicker generation. Therefore, claims 2, 8, and 9 are patentable over the combination of Nagaoka and Asano for at least those reasons presented above with respect to claim 1. Reconsideration and withdrawal of the rejection of claims 1, 2, 8, and 9 under 35 U.S.C. § 103(a) is respectfully requested.

In paragraph 2 of the Action, the Examiner rejects claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Nagaoka in view of Asano, further in view of U.S. Patent Application Publication No. 2005/0062625 to Stoll ("Stoll"). Applicants respectfully traverse this rejection.

Claim 3 depends from independent claim 2. Therefore, claim 3 is patentable over the combination of Nagaoka and Asano for at least those reasons presented above with respect to claim 2. Stoll discloses an arrangement for generating a clock signal for a sigma-delta analog to digital converter. However, Stoll fails to overcome the deficiencies of Nagaoka and Asano.

Since Nagaoka, Asano, and Stoll each fail to disclose or suggest calculating average values of pixel values of individual color components constituting an image of each frame or

calculating gains by comparing the average values of the pixel values of the individual color components of the image of each frame calculated by said average value calculating means for all the frames in one cycle of flicker generation as claimed, the combination of these three references cannot possibly disclose or suggest said feature. Therefore, even if one skilled in the art had some rationale to combine Nagaoka, Asano, and Stoll (which Applicants do not concede), the combination would still fail to render claim 3 unpatentable because the combination fails to disclose or suggest each and every claimed element. Reconsideration and withdrawal of the rejection of claim 3 under 35 U.S.C. §103(a) is respectfully requested.

In paragraph 3 of the Action, the Examiner rejects claims 6 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Nagaoka in view of Asano, further in view of U.S. Patent Application Publication No. 2004/0080630 to Kim ("Kim"). Applicants respectfully traverse this rejection.

Claims 6 and 7 depend from independent claim 2. Therefore, claims 6 and 7 are patentable over the combination of Nagaoka and Asano for at least those reasons presented above with respect to claim 2. Kim discloses an image sensor having a pixel array and method for removing flicker noise of the image sensor. However, Kim fails to overcome the deficiencies of Nagaoka and Asano.

Since Nagaoka, Asano, and Kim each fail to disclose or suggest calculating average values of pixel values of individual color components constituting an image of each frame or calculating gains by comparing the average values of the pixel values of the individual color components of the image of each frame calculated by said average value calculating means for all the frames in one cycle of flicker generation as claimed, the combination of these three references cannot possibly disclose or suggest said feature. Therefore, even if one skilled in the art had some rationale to combine Nagaoka, Asano, and Kim (which Applicants do not concede), the combination would still fail to render claims 6 and 7 unpatentable because the combination fails to disclose or suggest each and every claimed element. Reconsideration and withdrawal of the rejection of claims 6 and 7 under 35 U.S.C. §103(a) is respectfully requested.

The application is in condition for allowance. Notice of same is earnestly solicited. Should there be any outstanding matters that need to be resolved in the present application, the

Examiner is respectfully requested to contact Penny Caudle Reg. No. 46,607 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By Penny Caudle #46,607
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